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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,461	12/26/2001	Michael Kaschke	00118	2947

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EXAMINER

CHOI, WILLIAM C

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/025,461

Applicant(s)

KASCHKE ET AL.

Examiner

William C. Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-10, 22-25 and 31-36 is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 11, 15, 17-21 and 26-30 is/are rejected.
- 7) ☒ Claim(s) 2, 12-14 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 14 July 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings were received on 7/14/2003. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-7, 11, 15, 17-21 and 26-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Geier et al (U.S. 6,348,994 B1).

In regards to claims 1 and 15, Geier et al discloses a stereoscopic display system (Figure 4) comprising: a single display for displaying right and left partial images sequentially in time (column 3, lines 46-48 and 62-65, Figure 4, "O"); a first optical arrangement for defining a common viewing beam path along which said right and left partial images are transmitted (Figure 4, re optical components to the right of "LM"); a second optical arrangement for splitting said common viewing beam path into separate first and second component beam paths for viewing only said left and only said right

partial images, respectively (column 3, lines 46-48 and column 4, lines 20-48, Figure 4, re optical components inclusive of and to the left of "LM") and a switchover device for alternately coupling information shown on said display from said common viewing beam path separately into said first and second component beam paths in synchronism with the presentation of said left and right partial images on said display (column 4, lines 35-43, Figure 4, "PST" and "LM").

Regarding claims 3 and 17, Geier et al discloses the display system further comprising a light source for transmitting light along an illuminating beam path toward said display (column 3, lines 45-46, Figure 4, "L") and said switchover device including a polarization switch mounted in said common viewing beam path (column 4, lines 27-35, Figure 4, "LM").

Regarding claims 4 and 18, Geier et al discloses the display system further comprising a partially transmitting mirror (column 4, lines 35-43, Figure 4, "PST"); polarization filters mounted in corresponding ones of said first and second component beam paths (Inherent within "PST") and said polarization filters having respective pass-through directions crossed with respect to each other (Inherent within "PST").

Regarding claim 5 and 19, Geier et al discloses wherein the second optical arrangement comprises a polarization beam splitter for splitting said common viewing beam path into said first and second component beam paths (column 4, lines 35-43, Figure 4, "PST").

Regarding claim 6 and 20, Geier et al discloses wherein the switchover device includes a polarization switch mounted in said common viewing beam path (column 4, lines 27-35, Figure 4, "LM").

Regarding claims 7 and 21, Geier et al discloses wherein the second optical arrangement includes a transfer optic in one of the separate first and second component beam paths (column 4, lines 21-22, Figure 4, "OK1 and OK2").

In regards to claim 11, Geier et al discloses a stereoscopic display system (Figure 4) comprising: a single display for sequentially displaying right and left partial images (column 3, lines 46-48 and 62-65, Figure 4, "O"); an optical arrangement for defining an illuminating beam path and for illuminating said display sequentially in time with light having first and second directions of polarization different from each other (column 3, lines 62-65 and column 4, lines 27-43, Figure 4, "LM" and "PST"); and, said optical arrangement including a polarization beam splitter mounted in said illuminating beam path (column 4, lines 35-43, Figure 4, "PST").

In regards to claims 26, Geier et al discloses a stereoscopic display system (Figure 4) comprising: a single display for displaying right and left partial images sequentially in time (column 3, lines 46-48 and 62-65, Figure 4, "O"); a first optical arrangement for defining a common viewing beam path along which said right and left partial images are transmitted (Figure 4, re optical components to the right of "LM"); a second optical arrangement for splitting said common viewing beam path into separate first and second component beam paths for viewing only said left and only said right partial images, respectively (column 3, lines 46-48 and column 4, lines 20-48, Figure 4,

re optical components inclusive of and to the left of "LM"); a switchover device for alternately coupling information shown on said display from said common viewing beam path separately into said first and second component beam paths in synchronism with the presentation of said left and right partial images on said display (column 4, lines 35-43, Figure 4, "PST" and "LM"); and said switchover device including a polarization switch mounted in said common viewing beam path (column 4, lines 27-35, Figure 4, "LM") and a polarization beam splitter for splitting said common viewing beam path into said first and second component beam paths (column 4, lines 35-43, Figure 4, "PST").

Regarding claim 11, Geier et al discloses the display system further comprising a light source for transmitting light along an illuminating beam path toward said display (column 3, lines 45-46, Figure 4, "L").

Regarding claim 28, Geier et al discloses wherein the polarization switch is mounted in the common viewing beam path (Figure 4, "LM").

Regarding claim 29, Geier et al discloses the display system comprising a partially transmitting mirror (column 4, lines 35-43, Figure 4, "PST"); polarization filters mounted in corresponding ones of said first and second component beam paths (Inherent within "PST") and said polarization filters having respective pass-through directions crossed with respect to each other (Inherent within "PST").

Regarding claim 30, Geier et al discloses wherein the second optical arrangement includes a transfer optic in one of said separate first and second component beam paths (column 4, lines 21-22, Figure 4, "OK1 and OK2").

Allowable Subject Matter

Claims 8-10, 22-25 and 31-36 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in claims 8-10: a head worn viewing system specifically comprising first and second optical arrangements as claimed and a switchover device for alternately coupling information shown on a display from the common viewing beam path separately into the first and second component beam paths in synchronism with the presentation of the left and right partial images on the display.

The prior art fails to teach a combination of all the claimed features as presented in claims 22-25: a stereoscopic display system as claimed, specifically comprising a switchover device including a mirror alternately switchable into and out of a common viewing beam path so as to permit information shown on a display to pass separately into the first and second component beam paths as claimed.

The prior art fails to teach a combination of all the claimed features as presented in claims 31-36: a head worn viewing system specifically comprising first and second optical arrangements as claimed and a switchover device including a polarization switch mounted in a common viewing beam path and a polarization beam splitter for splitting the common viewing beam path into first and second component beam paths.

Claims 2,12-14 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in claims 2 and 16: a stereoscopic display system as claimed in claims 1 and 15 respectively, further wherein the switchover device includes a mirror switchable into and out of the beam path.

The prior art fails to teach a combination of all the claimed features as presented in claims 12-14: a stereoscopic display system as claimed, specifically comprising two light sources for emitting respective beams of light and the polarization beam splitter being mounted to receive the beams of light to coaxially superpose the beams of light one upon the other.

Response to Arguments

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Prior Art Citations

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kelly (U.S. 6,239,908 B1) is being cited herein to show a stereoscopic display system comprising the structural limitations of that of the claimed invention. However, additional rejections would have been repetitive.

Hur (U.S. 6,055,109) is being cited herein to show a head-mounted stereoscopic display device comprising some of the structural limitations of that of the claimed

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invention, but does not specifically disclose the optical arrangements and switchover device as claimed.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (703) 305-3100. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (703) 308-4883. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

W.C.
William Choi
Patent Examiner
Art Unit 2873
September 11, 2003


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800